EXHIBIT 209
REDACTED

CONFIDENTIAL: Draft, not to be shared outside DRX yet

nitish@, ▮▮▮▮▮▮▮▮▮
based on discussions with ▮▮▮▮▮ *l* ▮▮▮▮▮▮▮▮▮

Dynamic Revenue Sharing currently has the property that it may clear an auction in the so-called 'dynamic region', i.e. below the reserve price that would have otherwise been applied. Therefore, it has the property that a winning buyer who pays price p might have won even with a bid below p. Since clearing an auction in the dynamic region hurts Google's revenue share, DRSv2 compensates for this as follows: A buyer who obtained a discount in one auction (because the auction was cleared in the dynamic region) may have the price raised in a subsequent auction that it wins. Again, it can be possible for buyers who win such auctions and pay price p' to have won with a bid below p'.

While this increases seller and Google revenue, as well as increasing match rate for buyers, this mechanism can make it challenging for buyers who adopt sophisticated bidding strategies which rely on learning the smallest bid with which they could have won the auction. Thus, while launching DRS, we have chosen to exempt seller-friendly buyers (who increase auction revenue by effectively second-pricing themselves.)

However, the point remains that DRS can be challenging for buyers to learn how to optimize their bids. Therefore, we propose that after the upcoming launch of DRSv2 on August 1st, future versions move in the direction of truthfulness. In this context, truthfulness means never charging a buyer more than the reserve price declared in advance, and never recovering revshare through charging a buyer more than the minimum it would have needed to win.

We propose to recover revshare through Reserve Price Optimization: In particular, when the reserve price for a query is raised by Google due to RPO, it does not represent an opportunity cost to the publisher, and we are not obligated to pay the publisher this amount. Thus, by taking a larger revshare on these queries, we can ensure that Google meets its target revshare on average. This is inspired by the global optimization (RPO-aware / bid-oblivious DRS) approach.

In the rest of this document, we describe this in more detail, provide examples, and examine consequences for Google, buyers, and sellers, as well as some incentives.

Consider the following example with DRSv2:

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Query 1: Publisher-set reserve $0.80, raised to $1.0 including Google's revshare.
If the highest bidder bids $0.90, we may charge $0.80 (depending on the variant), and the buyer incurs a debt of $0.20

Query 2: Publisher-set reserve $2, raised to $2.50 including Google's revshare.
If the highest bidder bids $3.00, we raise the clearing price to $2.70, and recoup $0.20 of debt from the buyer.

Alternately, with RPO-aware DRS, after Query 1, we may reach the following situation

Query 2: Publisher-set reserve $2, raised to $2.50 including Google's revshare. With RPO, the reserve is raised to $2.65.
If the highest bidder bids $3.00, we charge $2.65, recovering $0.15 in debt from the buyer, leaving $0.05 still to be collected. Note that since we are setting reserve prices in advance of bidding, we do not expect to exactly match the effect of adjusting clearing prices after observing the bids.

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Using the RPO revenue increase to recover revshare allows us to magnify the revenue gains from RPO. In effect, RPO gains are leveraged at a ratio of up to ██; more precisely, any RPO gain used to recover revshare produces such a ██ gain.

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Consider the following example.
Query 1 has a publisher set reserve of $0.80, raised to $1.0 including Google's revshare.
Suppose the highest bidder bids $0.90. Without DRS, we do not clear this query.
Under DRS, we clear this query, charging (say) $0.80, and pay this entire amount to the publisher.
- Publisher payout increased by $0.80
- Google revenue increased by $0.80

Query 2: Publisher-set reserve $3, raised to $3.75 including Google's revshare. RPO raises this further to $3.95.
Suppose the highest bid is $5, and the second-highest bid $2. The auction clears at $3.95, as opposed to $3.75 without RPO.

Now, consider different scenarios corresponding to the mechanisms that we could have run:
1. No DRS and No RPO: In this case, the first query would not have cleared. Google's revenue would have been $3.75, and publisher revenue $3.
2. No DRS, only RPO. Again, the first query would not have cleared. Google's revenue from the second query would have been $3.95, and the publishers revenue would have been $3.16. This is a revenue increase of _____ for Google, and _____ for the publisher
3. RPO + DRS. Now, the first query would have cleared, and we recover revshare from the second query. Google's revenue from the two queries is $0.80 + $3.95 = $4.75, and the